California Building Energy Benchmarking Program: ENERGY STAR Portfolio Manager Training Transcript

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Hi everyone, my name is Chris and in this video, we'll be going over how to comply with California's Building Energy Benchmarking Program with ENERGY STAR Portfolio Manager

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We'll be going over 3 main topics: Portfolio Manager Set up which includes how to set up one or multiple properties; Meter and Data Set up which includes creating meters and uploading and reviewing data; and lastly, Generate Reports and Submit Your Data which includes creating groups and using the reporting links to submit

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ENERGY STAR Portfolio Manager is a secure, free, and interactive online energy management tool. It can help you track and assess energy, water, and waste consumption. There are also a lot of consultants out there who can assist you with benchmarking if you have any questions or need additional assistance.

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First we'll start with setting up a property

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In this step, I'll go ahead and show you how to create your own ENERGY STAR Portfolio Manager account. Here on the main page, you'll see a button that says create a new account. Go ahead and click on this button and it will bring you to a page where you will be able to create your own username and password. Scrolling down, they will also ask you a little bit about yourself, such as your name, your email address, and also your address as well. You will then be able to talk about your organization by putting in the name and also selecting the primary business or service of your organization. And also select whether or not your organization is an ENERGY STAR Partner. After filling in all of this information, you would go ahead and click on the button that says "Create my account" to get started.

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Now in this step, I'm going to go ahead and show you how to set up a multifamily campus.

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So now that you have your parent property set up, I'm going to go ahead and show you how to create individual buildings within that parent property or campus. So when you go to your main parent property profile, if you scroll down, you'll see this box here that says "Individual Buildings on this Property". So here is where you'll be able to add in your individual buildings so go ahead and click on this "Add a Building" button and it will bring you to this page where you can go ahead and enter in information about your individual building. So remember, we had 10 total buildings in this campus so ideally, you would want to go ahead and enter in all 10. But we'll only do a few for this training. So go ahead and let's just call one of the buildings "Building 1". And you would select your property type, so this would be "Multifamily Housing". And remember we had 500,000 square feet for the entire campus,

so let's just say this individual building was about 50,000 square feet. And they'll also ask you about irrigated area so if you have this, great. It's really good information to have. And if

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If you have multiple properties that you want to add and set up, there is a button on the left side where you can click 'upload and/or update multiple properties'. You can also choose the type of upload. You can choose 'Add new properties' and upload your template. There is an 'Add properties Template' you can fill out and you can bulk upload all your properties into Energy Star Portfolio Manager.

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The downloaded template looks like this, where you'll have an instructions page and various tabs for you to input details. First, we'll take a look at the "Properties" tab. This is where you can list out all of your properties with their respective details like address, year built, property type or primary function. You'll see that the column headers are color-coded and say if the information is optional or required.

One thing to focus on in the spreadsheet is the "property structure" in column O. If you are setting up an individual building, you'll select "single building". If you want to set up a campus, you can set up the main property (or parent property as ESPM calls it) as well as each individual building within that property (or child property as ESPM calls it). For parent properties, you'll select "multi-building" and indicate the number of buildings within the campus or property. For child properties, you'll select "part of a property"

Other details you can input are property uses. This is where you'll define how much gross floor area of the property is used for various functions. For example, if you have a building that's 60% retail space and 40% residential, you can define that gross floor area breakdown here. Same goes with parking details, where you can define the GFA of each type of parking you have, either open parking lots, partially or fully enclosed garages.

Lastly, you can input pool and wastewater treatment plant details if you have any.

And once you have your template all filled out, you can return to ENERGY STAR to upload it.

This completes the setup of your properties so now in the next section, Chris will go over how to set up meters and your data.

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Okay, so next we're going to jump right into the EPA portfolio Manager tool and give a live demonstration on creating some of those meters we just discussed. So, the next few slides we are assuming that a property has been established and property attributes have been assigned. We're going to focus on finding the meter attributes that are associated with the property. Let's jump right in.

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So, we'll begin with some high-level information here. The intention of the next step in the portfolio manager tool is to create what we call 'meters.' Meters are attached to the properties you previously created and applied attributes against. For Building Energy Benchmarking Program compliance, we are looking to identify a minimum of 12 months of energy use data from energy meters that serve the

building. Now, the 12-month data we are looking for would cover electricity, natural gas, district steam, or delivery fuel oil, but also, I want to remind folks that if there happens to be on site generations, such as solar or wind, that is also required for meter data we are going to attach to our property. And any other types of sources attached to the disclosed property. We will go through a live demo in a few minutes where we will explain how to create those meters. We will need a minimum of 12 months and the types of energy we discussed. We will have types of scenarios where you might have questions. For example, what if you have a meter that serves more than one property, say a shared electric meter? Well the way this works out with the Building Energy Benchmarking Program compliance is that if the sum of the building sharing a common meter exceeds 50,000 square feet, then compliance would apply. We would add the single meter into ENERGY STAR Portfolio Manager, and we would record the data from the shared meter at this level. If the buildings have separate meters, if the 2 buildings are on a common property. If no building exceeds 50,000 square feet and they have separate meters, then Building Energy Benchmarking Program Compliance does not apply. Both buildings are not considered disclosed buildings. Another thing to remember, commercial buildings with fewer than 3 tenants must have a tenant authorization to download information from utility energy usage data. If a multi-family property has more than 3 tenants, it is possible for us to extract aggregated public utility data. We can get that from a utility provider in an uploaded spreadsheet. For a summary, we are looking for at least 21 months of energy usage consumption, not cost, not demand, those other fields are optional. And each energy source connected to each property. Aright, let's get started.

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Okay, so to prepare for our meter creation exercise, I have created an account here in Portfolio Manager, and I have created 3 sample multi-family buildings in the So Cal Edison territory. Here are multi-family buildings one, two, and three. I have created these buildings for specific use cases we are going to be using in the next slide. We would start in our Portfolio Manager dashboard and portfolio view. I am going to click on our multi-family property two here. This property has been previously created, it has property attributes assigned to it, property uses and address. Once we look into this individual property, we will see some sub tabs here and I am particularly interested in the energy meter. We will be creating meters and moving them into the energy sub tab. We will see here there are no meters associated with this building right now. And we will see at the bottom there are four methods to creating meters. In this webinar, we are going to cover method one, method two, and I will show you method four. Three we may briefly touch on, but it will take far longer than the 30 minutes we have to go over it in detail. All these methods begin by simply clicking ‘Add a Meter’ button in the top right, so we will select that. That will take us to this screen.

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So, we will begin our meter generation process by selecting a property. Now we will be selecting those energy sources that are attached to those properties and defining the number of meters of the type of energy sources attached to the property. So, you can see here, for example building number two I have selected electricity, I have grid purchased energy. We are purchasing again from Southern California Edison. We have one electric meter serving this property. We also have one natural gas meter. Now, I will remind you the property could be more than one building. That was an attribute that was defined in the property details. Here we are simply assigning the types of meters and quantity of meters associated with this property description. In this case, this was a single building with 2 separate meters. Now

remember Building Energy Benchmarking Program compliance required us to record at least 12 months of data for all energy sources associated with the property. So, once we have tagged the type and quantity of meter associated with each property, we simply need to press the 'Get Started' button at the end of the page. Portfolio Manager will then provide us with a table of what we selected in the previous screen. And we will need to select each of those entries individually and define the units of measurement we are going to be working with in the next step. For example, we will be define natural gas as units in therms. And when is that meter active? Probably the date the building was built, in this case, 1990. Per chance, if that meter ever goes inactive, we can certainly deactivate it in this screen as well. This meter is still in use. We are going to do the same thing for the electric meter. We will record that in units of kWh and its active date will be the same as the gas meter above. So we are setting ourselves up for some spreadsheet upload tabs and whatever we record here in terms of units will be the units we will use in the upload spreadsheet. So that is important to note. We will click the 'Create Meters' tab and that will take us to the next screen.

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So, now that we have set up our meters for the example SCE Multi-Family building #2. It is time for us to associate some meter registries with these. So, let's first work with the electric grid meter. There are a few options for this so let's begin with hand entering the start date. We want all of 2017 days, so we'll enter 12/15/2016 that extended 30 days (1/15/2017). A usage amount we hand enter or copy and paste. Cost is optional. The blue fields are optional, and the black fields are required. We simply hit enter, 'Add another entry'. Continue to add Building Energy Benchmarking Program required 12 months of data. Another way to do this is to enter all the data into a spreadsheet. We have a simple and a complex spreadsheet. Click on the simple spreadsheet template link and you will get a downloaded spreadsheet. Open the spreadsheet using Microsoft Excel.

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We are looking at the Portfolio Manager Meter Consumption upload spreadsheet. You will see column D, F and G are optional. The usage is the value associated with the meter. It might be kWh, therms, etc. If one enters No in the estimation column, it is an actual reading. A Yes is an estimated reading, and Portfolio Manager will lump it together with an adjacent actual reading. You could have bills spanning one day. Any date gaps will be identified and a new spreadsheet will need to be uploaded.

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Back to the Portfolio Manager interface. Once we fill in the spreadsheet, we just click save as and upload the spreadsheet. The 12 readings should of come in with the required sections filled in. Then click the continue button. That will save the registries into the database. If we were to hit the back button, we would lose all our information. You will do the same thing for the gas meter. Even if you upload a spreadsheet you can continue to edit the reading by clicking on them. If there are gaps in dates, it will not let you continue until those have been fixed. Our data has no gaps, so we can move on.

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So, recapping our discussion as we see on our slide. We have Method 1, manually entering meter information. Start date, end date, consumption data, and perhaps some optional fields. You need a minimum of 12 months. It also includes the spreadsheet upload. Method 2 includes the utility data

automation. That is going to differ based on the servicing utility or where the property is located. So Cal Edison and PG&E for example have their own terms and conditions. They all require a share request that needs to be accepted. Then the Utility can provide a forward feed of data from their database.

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After establishing the meters and entries with your property, you want to understand the coverage of your data. Make your way to the energy tab and then under 'Change Meter Selections.' you will then be directed to a list of all the meters under your property. There are 2 bullet options below. Indicate whether the meters account for the total energy consumption or not. We need to answer whether this individual electric grid meter accounts for all the energy associated with the campus (comprising of 2 buildings). If you click no, then you will have to describe more about the meter function. Perhaps it's a meter associated with fire equipment, such as a fire pump. Most commonly you will be selecting accounting for total energy. We want to make sure we are accounting for sub-meters and are not double counting. If you do end up double counting, you will get a very incorrect EUI and Portfolio Manager score.

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One very important feature of ENERGY STAR Portfolio Manager is the data quality checker tool. Property Managers will find this tool under an individual building. Select a building under My Portfolio. Under the Summary tab, you will see 'Check for Possible Data Errors.' Click the button and select a timeframe (Ex. Jan 31 2017). Portfolio Manager will flag any information associated with 2017. It shows time periods missing data. The Red stop sign with an exclamation point will indicate missing data, whereas the yellow triangle with the exclamation point will notify any other discrepancies. If you select the warning, it will bring you to the definition. You should run the data quality checker prior to any submission, but also run it ongoing.

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So now that all your profiles are complete with details and data, we can now move to reporting your data to the energy commission.

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For campus properties, it is important to create groups that include all buildings in a campus. For example, if you have a campus of 10 buildings, create a group for that campus and add individual buildings to that group. This will allow you to generate a report on a building level rather than a main property or campus level. The energy commission requires a report on the building level and creating a building within the campus allows you to submit the building's data.

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After all your profiles are complete and your groups have been created, you can now submit your report. First, visit the Energy Commission's website to find the appropriate reporting link. Clicking the reporting link will prompt you to login into your ENERGY STAR Portfolio Manager account.

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After logging in you will need to fill out the form with information about your response. Like if you will be submitting data on behalf of yourself and which properties you will be submitting for.

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Under the reporting tab, you will then be able to locate your template report.

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To make sure your response is filled out and accurate, you can click preview response under the 'I want to' drop down menu. This is where you can see all the information you will be sending and identify any errors prior to submission.

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Going back to the reporting tab and the "I want to" drop down menu, you can select the option to send your response. This is where you'll fill out who to send a confirmation to about your submittal and certify the release of your data. Once you get a confirmation email from ENERGY STAR, it means you've completed compliance.

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For additional resources, we've provided here a few links.

The benchmarking page is where you'll find the reporting links and other training materials

If you sign up for the List Serve, you'll receive updates on the benchmarking program and any updates on training materials related to compliance

If you have any specific questions about compliance, please contact the benchmarking hotline via phone or email.

Let us know how else we can assist with your benchmarking compliance. Thank you!